



Southwestern Willow Flycatcher Draft Recovery Plan *Questions and Answers*

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1. Why is the southwestern willow flycatcher endangered and when was it added to the list of federally endangered species?

Changes to riparian ecosystems including reductions in water flow, physical modifications of streams, and removal of riparian vegetation have occurred as a result of dams and reservoirs, groundwater pumping, channelization of streams for flood control, livestock overgrazing, agriculture developments, and urbanization. The introduction and establishment of exotic plants, such as salt cedar and Russian olive, have changed flycatcher habitat, and an increase in cowbird abundance within flycatcher habitat has resulted in increased brood/nest parasitism to flycatchers. These factors have contributed to a significant decline in populations of the flycatcher throughout its range. Modification and loss of wintering habitat and “stopover” habitat used by flycatchers to replenish energy reserves during migration, and the continued use of agricultural chemicals and pesticides in Latin America are also contributing to the decline of flycatchers.

On February 27, 1995 the Service listed the southwestern willow flycatcher as an endangered species, under the Endangered Species Act, as amended.

2. Where and when are southwestern willow flycatchers found in the United States?

The historic breeding habitat of the southwestern willow flycatcher included riparian areas in southern California, southern Nevada, southern Utah, Arizona, New Mexico, western Texas, southwestern Colorado, and the extreme northwestern portion of Mexico. In the arid southwestern United States, riparian habitat has always been uncommon, isolated, and widely dispersed.

Flycatchers migrate north from Latin America to their breeding areas arriving in early May. Flycatchers build nests, breed, incubate and hatch eggs through July, then fledge their juveniles through mid-August and depart for their wintering grounds by mid-September.

The flycatcher’s current range is similar to its historical range, but the quality of suitable habitat within that range has been significantly reduced. Flycatchers occur from near sea-level to over 2600 m (8500 ft) in elevation, but are primarily found in lower elevation riparian habitats. Throughout its range, the flycatcher’s distribution follows that of its riparian habitat; relatively small, isolated, widely dispersed locales. The flycatcher winters in Mexico, Central America, and possibly northern South America.

3. What constitutes southwestern willow flycatcher breeding habitat?

The southwestern willow flycatcher breeds in patchy to dense riparian habitats along streams, reservoirs, or other wetlands. Common tree or shrub species include willow, seep willow, boxelder, stinging nettle, blackberry, cottonwood, arrowweed, tamarisk (salt cedar), and Russian olive. Habitat characteristics vary across the subspecies' range. However, occupied sites usually consist of dense vegetation in the patch interior, or dense patches interspersed with openings, creating a mosaic that is not uniformly dense. In almost all cases, slow-moving or still water, or saturated soil is present at or near breeding sites during non-drought years.

4. Isn't southwestern willow flycatcher habitat already protected by the designation of critical habitat?

When the Service listed the flycatcher as endangered, under the Act, critical habitat was proposed along approximately 643 linear miles of riparian habitat throughout the species' range. At the time the Service published the final rule listing the species, it determined that additional information was necessary to make a final determination of critical habitat. The final designation of critical habitat for the flycatcher was published in the Federal Register on July 22, 1997. Following the designation of critical habitat, a lawsuit was filed in Federal Court challenging the Service's economic analysis of the impacts of designating critical habitat for the flycatcher. The Court ruled on May 11, 2001, that the critical habitat designation be set aside.

5. What is the purpose of a recovery plan?

After a species is listed, under the Act, the Service is required to prepared a recovery plan, unless such plans would not contribute to the conservation of the species. A recovery plan outlines specific tasks needed to recover a species to the point where protection under the Act is no longer necessary. Recovery Plans provide a blueprint for Federal, Tribal, State, and private cooperation in the conservation of threatened and endangered species and their ecosystems. The Plans establish goals and objectives to recover a species, describe site-specific management actions to achieve these goals, and estimate the time and costs associated with recovery efforts. Recovery plans are not regulatory documents and do not require non-Federal entities to undertake recovery actions.

6. How many recovery units are identified in the draft recovery plan?

The Draft Recovery Plan identifies six Recovery Units that are based on large watershed or hydrologic units. Each of the Recovery Units is further subdivided into Management Units.

<u>Recovery Unit</u>	<u>Management Units</u>
Coastal California	Santa Ynez, Santa Clara, Santa Ana, San Diego
Basin and Mojave	Owens, Kern, Amargosa, Mojave, Salton
Upper Colorado	Dolores, Sevier, Powell, San Jaun
Lower Colorado	Virgin, Pahrangat, Little Colorado, Middle Colorado, Hoover - Parker, Bill Williams, Parker - Mexico

Gila	San Francisco, Upper Gila, Middle Gila/San Pedro, Santa Cruz, Roosevelt, Verde, Hassayampa/Agua Fria, Lower Gila
Rio Grande	San Luis Valley, Upper Rio Grande, Middle Rio Grande, Lower Rio Grande, Texas Rio Grande, Pecos

7. What are the goals proposed in the draft recovery plan for the southwestern willow flycatcher?

The Draft Recovery Plan establishes criteria that should be met before the southwestern willow flycatcher could be considered for downlisting from endangered to threatened, and for eventual removal from the Federal list of threatened and endangered species.

To be considered for downlisting from endangered to threatened, there should be at least 1,950 pairs of flycatchers (3,900 individuals) geographically distributed in the six Recovery Units identified in the Draft Recovery Plan.

To be considered for removal from the Federal list of threatened and endangered species, flycatcher populations and the habitat the species requires should be protected into the foreseeable future through the development and implementation of conservation management agreements. These agreements must eliminate or minimize the major threats to the flycatcher, ensure that ecological processes needed to perpetuate flycatcher habitat prevail, and demonstrate their effectiveness for 10 years following the downlisting of the flycatcher from endangered to threatened.

Additionally, the amount of suitable breeding habitat within each Management Unit (see attached table) should be double that required to support the target number of flycatchers within each of the Units.

8. What is the focus of the draft southwestern willow flycatcher recovery plan and suggested recovery efforts?

The focus of the recovery efforts in the Draft Recovery Plan reflect the numerous, complex, and inter-related threats to the flycatcher. Habitat loss and degradation are the principle factors in the decline of the species and the Draft Recovery Plan emphasizes ways to increase and improve breeding habitat by restoring, mimicking, and/or recreating natural processes that influence riparian ecosystems.

To address the threats to the flycatcher, the Draft Recovery Plan recommends undertaking actions to restore natural flood cycles where possible; reduce impacts of domestic livestock, native ungulates, and feral horses and burros; improve population stability; secure long-term protection of breeding habitat; manage exotic plants; reduce brood parasitism by brown-headed cowbirds; and conduct research to refine management practices and knowledge of flycatcher and riparian habitat ecology.

9. What is a Recovery Team and what is the structure of the Southwestern Willow Flycatcher Recovery Team?

Recovery plans may be developed by the Service, and may use the expertise of individuals from other Federal or State agencies, or private contractors. Another option is to form a Recovery Team, comprised of

species experts and those with knowledge of recovery plan design or implementation. The Southwestern Willow Flycatcher Recovery Team is composed of a Technical Subgroup (TSG) that includes 13 academic scientists, researchers, and resource managers with a wide array of expertise in avian biology and ecology, southwestern willow flycatcher ecology, cowbird ecology, riparian ecology, hydrology, range management, and conservation planning.

In addition, a Tribal Working Group was formed as a subset of the Recovery Team to identify issues on Native American lands. There are also six Implementation Subgroups (ISG); one for each of the Recovery Units. The ISGs include more than 200 community representatives from across the southwest including ranchers, water and power interests, environmental interests, federal and state land managers, and local governments. The role of the ISGs is to provide feedback to the Recovery Team Technical Subgroup as to the feasibility of recovery strategies and actions, and to implement recovery actions to recover the flycatcher within the United States.

10. How were the draft goals and prescriptions for attaining them developed?

The TSG developed in-depth “Issue Papers” for each of the major issues involved in flycatcher recovery. ISG feedback was incorporated into the issue papers. These finalized issue papers, together with a Tribal Working Group issue paper, form the basis of the goals and strategies in the Draft Recovery Plan. The Subgroup and Issue Paper approach was used to incorporate the best possible science, and address the major complex, technical, and logistical challenges to flycatcher recovery.

11. How are the recovery goals to be met?

Recovery plans do not have the effect of law or regulation. They provide a blueprint for identifying actions that, if implemented, may further the recovery of a species. Application and implementation of the elements of the draft flycatcher recovery plan will have to be customized to meet the condition of the habitat, regional threats to the flycatcher, local demands on natural resources, land ownership, state law, and water rights for each of the six Recovery Units (watersheds), each smaller Management Unit (river basin) and each identified river reach.

The Draft Recovery Plan provides guidance for attaining habitat and population recovery goals, but the actual implementation of local efforts to meet those goals will rely upon the direction of each Recovery Unit’s ISG.

Individuals and groups called upon to implement recovery activities are diverse; land trusts, conservation organizations, irrigation districts, dam operators, power providers, city planners, ranchers, and Federal, Tribal, State and municipal agencies, to name a few. The recovery goals, together with local ISG-identified projects and priorities, will provide needed direction to these individuals and groups as well as private land owners and industry groups seeking conservation measures for Habitat Conservation Plans (section 10) and federal agencies seeking reasonable and prudent alternatives for Endangered Species Act (section 7) compliance. [Reasonable and prudent alternatives are only devised if, in fact, there is a jeopardy opinion. A section 7 consultation does not automatically require R&P alternatives.]

12. How have human-caused activities effected the southwestern willow flycatcher and their breeding habitat, and how will the adoption and implementation of the recovery plan affect these activities?

12(a) River management for flood control, surface water supply, and power generation

Most major (and many minor) rivers that once supported flycatcher habitat have been altered by the construction of dams. The operation of dams can modify, reduce, destroy, or potentially increase riparian habitats both downstream and upstream of the dam site.

In seeking to secure and improve occupied, suitable, and potential breeding habitat, the Recovery Plan recognizes the primary importance of dam operations and its relationship to habitat for the flycatcher. Fully realizing that water supply, electrical generation, and flood control are essential to local communities, and due to varying and complex water rights, jurisdictional influences, state and federal laws, and unique hydrological, physical, and biological influences for each river and stream, the Draft Recovery Plan identifies dam management goals that could benefit riparian habitat, but leaves the specifics for attaining those operational goals to the respective ISGs and local river and dam managers.

Adding or utilizing operational flexibility, dam operators should allow occasionally complex flow regimes with a wide range of discharge levels, and flood or spike flows mimicking natural seasonal flow regimes that benefit native plants and discourage exotics (high, spike flows in winter and low summer flows). Daily flow fluctuations for hydroelectric generation should be kept as gradual as possible to prevent bank erosion and loss of riparian habitat. Reservoir levels should be managed to establish and maintain lake-fringe and inflow habitat. Surplus flows should be used to increase and add water to marsh areas between levees and on flood plains.

12(b) Agriculture development, water diversion, and groundwater pumping

Agricultural development entails not only direct clearing of riparian vegetation, but also the re-engineering of floodplains (e.g. draining, protecting with levees), diversion of water for irrigation, groundwater pumping, and herbicide and pesticide application. These activities affect flycatchers and their habitat. Agricultural development can also increase the severity of cowbird parasitism.

In many river reaches, agricultural return flows sustain riparian habitat; however, natural functioning ecosystems would be more likely to sustain flycatchers populations over the long-term. With reductions in irrigated agriculture, additional water and land could be made available for restoration of flycatcher habitat. However, in the short-term, reductions in agricultural return flows can threaten some flycatcher populations. The obvious conclusion to the point-counterpoint issues surrounding agricultural development and water diversions is that many situations are unique and call for individualized evaluation, solutions, and timing, best arrived at by ISGs together with irrigators.

Many solutions for improving flycatcher habitat require increased availability of water in active channels or in near-channel areas. Because agriculture withdrawals from rivers and groundwater are much larger than any other economic sector, the agricultural community must be part of any long-term solution. The draft plan calls agricultural interests in all major flycatcher watersheds to engage with agencies, municipalities, and other parties to take proactive measures to provide more water in rivers by managing groundwater more

efficiently and using urban waste water and irrigation tail waters for habitat restoration.

12(c) Residential and urban development

Urbanization in or next to flycatchers habitat has a variety of inter-related direct and indirect effects which result in loss or inability to recover habitat. Development creates demands for domestic and industrial water use resulting in reservoir construction, groundwater pumping, and flood control structures that alter stream hydrology; it may also lead to the construction of more bridges and roads, more traffic, and increased sand and gravel mining, all of which are detrimental to riparian habitat and the species that depend on those habitats. Developments also result in an increase in predators such as cowbirds, domestic cats, and ravens.

The Draft Recovery Plan encourages private landowners and municipalities to educate residents about the importance of protecting flycatcher habitat, promoting the use of native plants in landscaping and revegetation, reducing of fire hazards, controlling domestic cats, and undertaking efforts to reduce cowbirds and other predators drawn to urban areas.

12(d) Recreation

In the warm and arid Southwest, recreation is often concentrated in riparian areas because of the shade, water, aesthetic values, and fishing, boating, swimming, hiking opportunities they provide. Consequences to these activities can include a reduction in vegetation due to trampling, clearing, wood cutting and soil compaction; bank erosion; increased incidence of fire; introduction of exotic plant species; increases in predators and scavengers such as ravens, grackles, domestic cats, and skunks; increased numbers of brood-parasitic cowbirds; and noise disturbance. As the human population grows, the effects of these activities have become considerable.

The Draft Recovery Plan identifies measures land managers and recreationists can take to reduce the effects of recreational activities on flycatchers. Among these are locating trails, campsites, and heavy-use areas away from identified flycatcher habitat, and directing vehicles, boating, swimming, tubing, and fishing away from suitable and occupied habitat, especially during the breeding season. Banning fires in vulnerable habitat when fire danger is high and limiting or prohibiting fuelwood collecting in riparian areas is recommended. Recreation-related impacts can also be reduced by implementing techniques ranging from complete restriction to some acceptable level of use.

12(e) Cowbird control

The southwestern willow flycatcher is vulnerable to nest parasitism by the brown-headed cowbird. Brown-headed cowbirds lay their eggs in the nests of other bird species. The “host species” then incubates the cowbird eggs and rears the young. Cowbird eggs hatch after a relatively short incubation period and the hatchlings develop quickly, often out competing the host’s own young for parental care. Cowbirds may also remove host eggs from the nest, functioning as predators. The range and population of brown-headed cowbirds have increased since European settlement in the United States due to expansion of suburban and agricultural areas, and habitat fragmentation. Brood parasitism has contributed to the flycatcher’s endangered status, and is an impediment to recovery of flycatchers and many other songbirds.

Efforts to reduce cowbird parasitism include increasing the amount and quality of riparian habitat. Increased

quality and habitat patch size will allow for greater flycatcher populations, resulting in the dispersal of cowbird eggs over a greater number of flycatcher nests, thereby reducing the impacts to a particular population of flycatchers. Cowbird nest parasitism and predation tends to be concentrated along habitat edges; increasing the size of riparian patches with greater interior habitat are likely to reduce brood parasitism.

10(f) Livestock and wild ungulate grazing

Riparian ecosystems and flycatchers have evolved with herbivores. However, the amount of grazing by herbivores is much greater than historical levels due to the reduction in some native species (beaver), intensive management of deer and elk, and introduction of non-native domestic livestock, wild horses and burros. Overgrazing in some western locations has been a significant factor in the modification and loss of riparian habitats. Overutilization of riparian vegetation by livestock, elk, and wild horses and burros can reduce the density of flycatcher habitat vegetation. Consumption of palatable broadleaf willows and cottonwood saplings and understory grasses and forbs alter riparian habitat structure and favor the colonization of unpalatable or grazing-tolerant exotic plant species. The draft plan recognizes that proper grazing and wild ungulate management must be developed locally.

The draft plan calls for the management of livestock grazing to restore desired processes and increase habitat quality and quantity. For the conservation of flycatcher-occupied areas and restoration of riparian habitat, the Draft Recovery Plan and a specific issue paper provide forage utilization and seasonal use guidelines for grazing during growing and non-growing seasons at various elevations.

10(g) Fire ecology and management

Fire is an imminent threat to occupied and potential flycatcher breeding habitat. Although fires occurred to some extent in some of these habitats historically, many native riparian plants are neither fire-adapted nor fire-regenerated. Today, lack of regular flood events in regulated rivers can result in an increased accumulation of fuels and an expansion of highly-flammable tamarisk and arrowweed. These factors, combined with high levels of recreation in riparian areas, have increased the frequency and size of fires. Fires in riparian areas are typically catastrophic, causing immediate and drastic changes in riparian plant density and species composition.

The Draft Recovery Plan recommends the development of fire risk and fire management plans for flycatcher breeding sites and flycatcher-related riparian restoration areas. Fire suppression should occur in habitat and adjacent buffer zones and efforts to reduce recreational fires have been recommended. The restoration of more natural flood flows would help to cleanse riparian areas of fuel buildup. Together with restoration of groundwater and base flows, flood flows would favor the development and restoration of less fire-prone native species over highly-flammable exotics.

10(h) Tribal lands management

The Tribal Working Group met with the TSG and submitted an Issue Paper identifying issues related to the recovery of the flycatcher on Tribal lands. The Draft Recovery Plan calls upon the Service to provide technical assistance in developing watershed management plans. The Service will support Tribal efforts to improve occupied habitats by providing fencing, off-site livestock drinkers, technical assistance in

developing fire plans and post-fire restoration plans, and habitat monitoring programs. We will also provide technical assistance and funding as available for conducting flycatcher surveys and monitoring occupied habitats.

13. How much will recovery cost, who will bear those costs, and how will recovery efforts be funded?

Implementation costs associated with recovery of the southwestern willow flycatcher are scheduled to occur over the next five years at an estimated total cost of \$104,345,000. The implementation schedule in the Draft Recovery Plan spells out which parties will have input into implementing and achieving each of the prescribed recovery actions, with each contributing to the costs of implementing their respective activities.

Recovery tasks have been prioritized. Highest priority is given to those tasks that must be taken to prevent the extinction or irreversible decline of the flycatcher (\$77,825,000). The next highest priority are those tasks that will prevent a significant decline in flycatcher population and habitat short of extinction (\$21,590,000). The next priority level includes all other actions necessary to provide for full recovery of the species (\$4,930,000).

14. What other species will benefit from the restoration of riparian habitat for the flycatcher?

Southwestern riparian habitats are by nature diverse and dynamic, providing a wide spectrum of habitats for many different species. There are a number of species that are currently listed as threatened or endangered, under the Act, as amended, which utilize the same habitats as the flycatcher (including 39 species of vertebrates). The disproportionately high level of threatened and endangered species indicates their riparian habitats have been degraded over a wide area. If riparian and aquatic ecosystems in the arid Southwest are restored to their natural, dynamic, heterogeneous conditions, many imperiled species will benefit, as will recreationally and economically important species and habitats.